By Mr. J. F. Miller.

| | | | |
|---|---|---|---|
| Epoch | 1851·64 | Distance | 6″·508 |
| — | 1852·71 | — | 6·466 |

The first of these results is derived from a mean of 32 measures, and the latter from a mean of 22.

By myself.

| | | | |
|---|---|---|---|
| Epoch | 1850·66 | Distance | 6″·459 |
| — | 1851·58 | — | 6·378 |
| — | 1852·63 | — | 6·362 |
| — | 1854·62 | — | 6·300 |

The first result is from a mean of 56 measures, the second from a mean of 126, and the third from a mean of 78, but the fourth is merely a single night's result, and therefore of little value.

" An inspection of the above measures shows that three different observers, working independently, have all obtained results which conspire to prove that the distance is now decreasing.

" If the distance is really increasing, it is, at any rate, extraordinary, that these results should indicate the contrary.

" In making these remarks, I am very far from wishing to cavil at Mr. Powell's elements. On the contrary, I think that his orbit is decidedly the best that has yet appeared, but I think this able computer has hardly given to the measures of distance the weight to which they are entitled. If the elements could be varied so as to represent the recent observed distances with tolerable precision, without introducing more serious differences in the angles, it would, I think, be more satisfactory.

" Mr. Powell's important researches have, however, indisputably established a fact which has been doubted in high quarters,—that the relative motions of the components of 70 *Ophiuchi do* follow the Newtonian laws of gravitation.

" *Tarn Bank, Jan.* 24, 1855."

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## *On a Telescopic Appearance seen in the Moon.*
### By Robert Hart, Esq.

(*Extract of a Letter to the Astronomer Royal.*)

" Since I wrote you last [respecting the two fiery-looking spots in the moon's disk] I have taken every opportunity of examining the same region of the moon while it was in shadow, and also during the early part of this moon, and most carefully when she was of the same age. But there is no such appearance of any such light as was so visible on the night of the 27th December last, between 7 and 12 P.M. (the time that I observed her).

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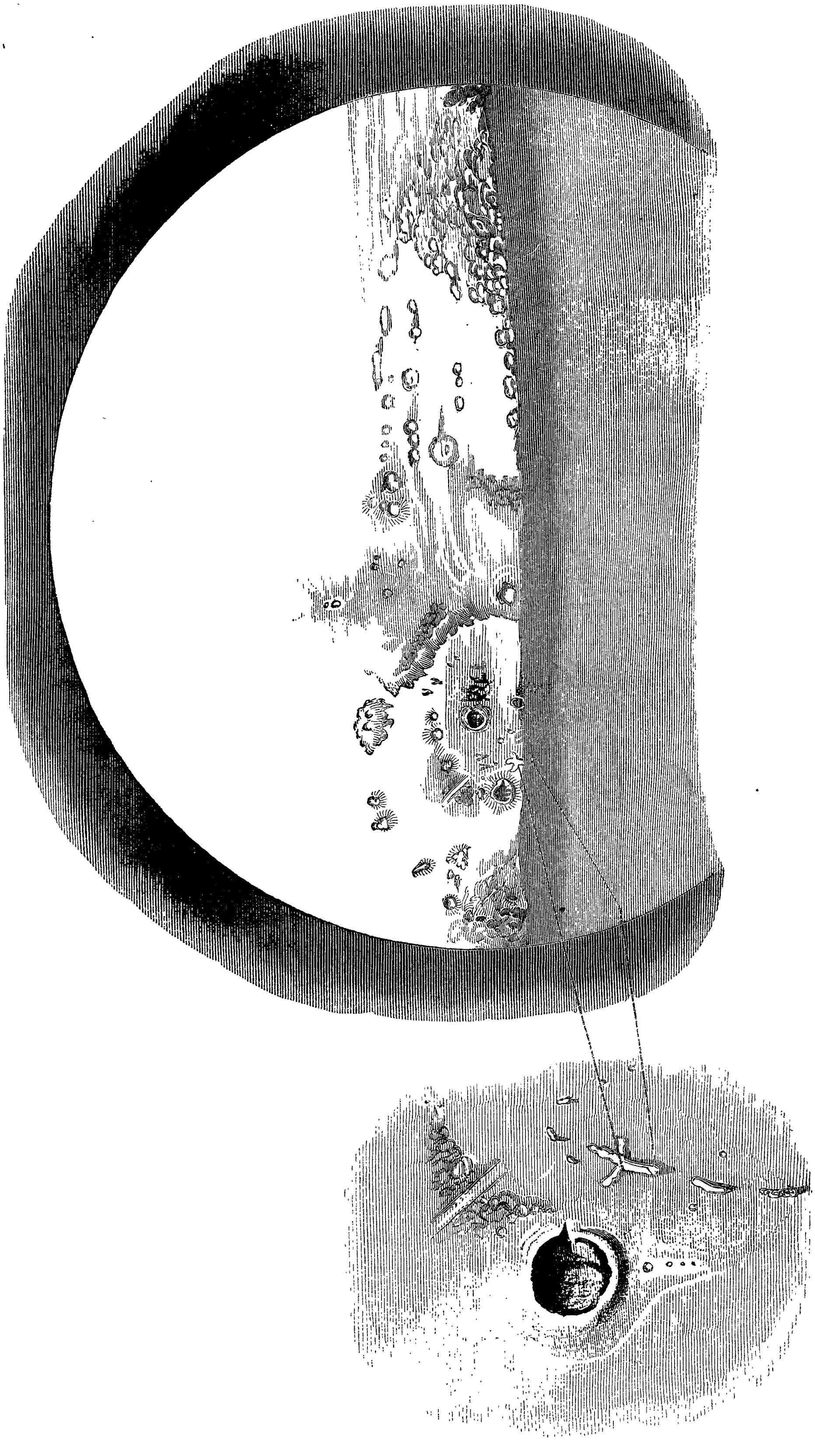

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"I have made a sketch, which I enclose, of the region where they were; and again when she was two days older, and when the ridge was full in the light I made the enlarged sketch.

"I have no doubt the light was from the two small mouths shown in the angles of the cruciform ridge.[*] . . . In looking at the ridge, as drawn, the form of the lights is just what we should expect anything flowing from these mouths would take. If they are mouths, which I am assuming them to be, they are very small.

"My telescope is a reflector of 12 feet focal length and 10 inches in diameter, of our own making. The speculum has not been polished these twelve years, and may not show so sharp as it did at first."

## *Description of an Apparatus for the Mechanical Imitation of Precession.* By T. W. Burr, Esq.

"Being desirous, for educational purposes, of obtaining some piece of mechanism which should represent the motion of precession in a more tangible form than can be done by diagrams on a plane surface, my attention, while considering the subject, was arrested by a description in vol. i. page 43, of the *Monthly Notices*, of an instrument invented by Mr. Atkinson, to illustrate certain phenomena of rotation. The account is very short and not very lucid, stating that 'it consists of a flat circular disk, through the centre of which passes a small endless screw, having a cup in one of its extremities.' When this cup is set on a point, and the disk made to rotate in its own plane, the whole rotating plane performs at the same time a slow revolution round the perpendicular to the horizon which passes through the point of suspension, and the direction of this revolution will either coincide with, or be the reverse of, the rotation, accordingly, as the centre of gravity is above or below the point of suspension; affording in the latter case, says Mr. Atkinson, 'an apt illustration of precession.'

"Acting upon this suggestion, and adding such improvements as enable the instrument more effectually to represent the real state of the case, I have had the apparatus submitted to the meeting constructed.[†] It consists of a small terrestrial globe, having a steel axis projecting from the north pole, and the equator extended into a broad brass disk. The globe is suspended on a point, rising into its interior from a base which supports a horizontal graduated circle representing the ecliptic; and the whole

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[*] The writer here makes a remark which is not very clear respecting the form of the luminous spots. The light on the right side would appear to have consisted of two streaks of unequal length disposed in opposite directions.—EDITOR.

[†] It was beautifully made by Mr. Hislop, chronometer-maker, 108 St. John Street Road.